K A N S A S

RODERICK L. BREMBY, SECRETARY — KATHLEEN SEBELIUS, GOVERNOR

DEPARTMENT OF HEALTH AND ENVIRONMENT

AIR EMISSION SOURCE CONSTRUCTION PERMIT

Source ID No.: 1490001

Effective Date: October 4, 2005

Source Name: Westar Energy, Inc. - Jeffrey Energy Center

NAICS: 221112, Fossil fuel power generation

Site Location: 25905 Jeffrey Road
St. Mary's, Kansas 66536

Site Owner/Operator Name: Westar Energy, Inc.

Site Owner's/Operator's Mailing Address: 818 South Kansas Avenue
Topeka, Kansas 66612

Contact Person for Site Owner/ Operator: Mr. Daniel R. Wilkus, P.E. – Manager, Air Programs
Telephone Number (785) 575-1614

This permit is issued pursuant to K.S.A. 65-3008 as amended.

Description of Activity Subject to Air Pollution Control Regulations

Westar Energy, Inc. (Westar) is proposing to initiate a NO_x Reduction Project on Unit 3 (JEC3) at the Jeffrey Energy Center. The project will include the addition of low-NO_x burners, separated overfire air (SOFA), and changes to the pulverizers to improve consistency of coal fineness to allow proper operation of the low-NO_x burners. This project will result in a decrease in nitrogen oxide (NO_x) emissions and an increase in carbon monoxide (CO) emissions. The proposed modification will be subject to the requirements of 40 CFR 52.21, Prevention of

Significant Deterioration (PSD) as adopted under K.A.R. 28-19-350 as a result of being a major modification of a major stationary source for at least one regulated pollutant emitted in excess of the PSD significant emission levels. JEC3 is an affected source subject to Title IV of the Federal Clean Air Act, Acid Deposition Control. The proposed project does not constitute a modification or reconstruction for the purpose of determining applicability of New Source Performance Standard (NSPS) requirements.

Emissions of oxides of nitrogen (NO_x) and carbon monoxide (CO) were evaluated for this permit review. This project is subject to the provision of K.A.R. 28-19-300 (Construction permits and approvals; applicability) because the potential-to-emit of CO exceeds 100 tons per year.

An air dispersion modeling impact analysis, an additional impact analysis, and a Best Available Control Technology (BACT) determination were conducted as a part of the construction permit application process.

Significant Applicable Air Pollution Control Regulations

The following significant Kansas air quality regulations were determined to be applicable to this project:

K.A.R. 28-19-300 Construction permits and approvals; applicability

Air Emission Unit Technical Specifications

The following equipment or equivalent is approved:

1. Installation of low-NO_x burners.
2. Addition of separated overfire air (SOFA) capability
3. Modification of existing pulverizers

Air Emissions Estimates from the Proposed Activity

Pollutant Type	Net Change in Emissions (Tons per Year)
Nitrogen Oxides (NOx)	-7,090
Carbon Monoxide (CO)	5,7021[7]

[7] Emission estimates are based on new emission limit.

Air Emission Limitations

1. Coal-fired Boiler:

   a. The thirty (30) day rolling average emission rate of carbon monoxide (CO) emissions shall not exceed 0.25 lb/mmBtu, excluding periods of startup, shutdown, and malfunction.

   b. The purpose of this project is to reduce the NO_x emissions from JEC3. In the event difficulties are encountered demonstrating compliance with the CO limit while optimizing NOx emissions, the owner or operator may request a revision to the CO limit.

Monitoring, Recordkeeping and Reporting

1. Compliance with the CO BACT limit shall be demonstrated with a continuous emission monitoring system (CEMS). The CO CEMS shall be installed, certified, operated, maintained, and quality assured according to 40 CFR 60, Appendix B, Performance Specification 4 (PS4) and 40 CFR 60, Appendix F (Quality Assurance/Quality Control) within 180 days after startup.

2. Provide a report of the CEMS certification within 30 days after certification is completed.

3. Reports of excess emissions shall be submitted semi-annually in accordance with the requirements in 60.7(c).

4. Records shall be kept on site for 2 years in accordance with 60.7(f).

General Provisions

1. This document shall become void if installation of the NO_x Reduction Project has not commenced within 18 months of the effective date of this permit, or if installation is interrupted for a period of 18 months or longer.

2. A construction permit or approval must be issued by KDHE prior to commencing any construction or modification of equipment or processes which result in an increase in potential-to-emit equal to or greater than the thresholds specified at K.A.R. 28-19-300.

3. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow a representative of the KDHE (including authorized contractors of the KDHE) to:
   a. enter upon the permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under conditions of this

document;

b. have access to and copy, at reasonable times, any records that must be kept under conditions of this document;

c. inspect at reasonable times, any facilities, equipment (including monitoring and control equipment), practices or operations regulated or required under this document; and

d. sample or monitor, at reasonable times, for the purposes of assuring compliance with this document or as otherwise authorized by the Secretary of the KDHE, any substances or parameters at any location.

4. The emission unit or stationary source which is the subject of this document shall be operated in compliance with all applicable requirements of the Kansas Air Quality Act and the Federal Clean Air Act.

5. This document does not relieve the permittee of the obligation to obtain other approvals, permits, licenses or documents of sanction which may be required by other federal, state or local government agencies.

6. Issuance of this document does not relieve the owner or operator of any requirement to obtain an air quality operating permit under any applicable provision of K.A.R. 28-19-500.

Permit Engineer

_____ _____

Rick Bolfing, P.E. Date Signed
Environmental Engineer
Air Construction/Operating Permits & Compliance Section

RJB:saw
c: NEDO
C-6420

K A N S A S

RODERICK L. BREMBY, SECRETARY

KATHLEEN SEBELIUS, GOVERNOR

DEPARTMENT OF HEALTH AND ENVIRONMENT

October 4, 2005

Source ID No. 1490001

JoAnn M. Heiman
Environmental Protection Agency, Region VII
901 North 5th Street
Kansas City, KS 66101

Re: Prevention of Significant Deterioration (PSD) Air Construction Final Permit and Response to Comments for the NOx Reduction Project at Westar's Jeffrey Energy Center (JEC) Unit #3.

Dear Ms. Heiman:

The final Air Permit for the referenced facility's project is enclosed. The "Response to Comments" ensues.

In a letter dated September 14, 2005, EPA attached comments for the referenced documents. The attachment dealt with two (2) perceived deficiencies with the draft permit.

The first issue in the attachment is that EPA believes the BACT analysis in the initial application stops short in validating that a CO oxidation catalyst is technically infeasible. Attached is supplemental information describing why CO oxidation catalyst is technically infeasible. From the information given in the supplemental information, KDHE concurs with the conclusions because of the harmful sulfur byproducts generated, the particulate plugging problem, and the vendors statements that they do not offer a CO oxidation catalyst for coal fired applications.

The second issue in the EPA's attachment concerns the lack of periodic monitoring in the draft permit to verify continuing compliance with the CO limit. KDHE has remedied this by requiring the source to install a CO CEMS, report excess emissions semi-annually, and retain records for 2 years. However, Westar would like to request the proposed CO emission limit be changed from 300 parts per million on a dry basis (ppm, dry), corrected to 3 percent oxygen, to an equivalent mass emission rate of 0.25 pounds of CO per million British Thermal Units (lb/mmBtu). The 0.25 lb/mmBtu CO emission rate was used to calculate hourly emission rates for the analyses performed in support of the PSD permit including but not limited to the ambient air quality dispersion modeling analysis and the visibility impact analysis. By changing the CO emission rate to 0.25 lb/mmBtu, Westar will not have to incur additional costs of purchasing, installing and certifying an in-stack oxygen CEM to correct the measured CO ppm to 3 percent oxygen. Westar will utilize their existing, certified carbon dioxide monitor to convert the measured CO ppm into lb/mmBtu. KDHE concurs with Westar's determination of equivalency and incorporated the new emission limit based on a 30 day rolling average.

DIVISION OF ENVIRONMENT
Bureau of Air & Radiation
Air Construction/Operating Permits & Compliance Section
CURTIS STATE OFFICE BUILDING, 1000 SW JACKSON ST., STE 310, TOPEKA, KS 66612-1366
Voice 785-296-1570 Fax 785-291-3953 http://www.kdhe.state.ks.us

Ms. JoAnn M. Heiman
October 4, 2005

If you have any questions about the permit or the response to comments, feel free to contact me at (785) 296-1576.

Sincerely,

Rick Bolfing, P.E.
Environmental Engineer
Air Construction/Operating Permits & Compliance Section

RB:saw
Enclosure
c: NEDO
C-6420